

**STATEMENT OF
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U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
U.S. HOUSE COMMITTEE ON
TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT**

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Introduction

Good morning, Mr. Chairman and members of the Subcommittee. My name is Benjamin Grumbles and I serve as the Assistant Administrator for the Office of Water at the U.S. Environmental Protection Agency (EPA). Thank you for inviting me to participate in this hearing to talk about the role of our Agency, and specifically the Office of Water, in the response and recovery efforts in the wake of Hurricane Katrina. I look forward to sharing with you our experience, progress and expectations for the coming weeks and months.

The magnitude and range of the environmental challenges presented by the two Hurricanes is unprecedented in the United States. Our hearts go out to the people of the Gulf region, and we share with you an urgent sense of duty to help restore the communities affected by Hurricanes Katrina and Rita.

Last month, I had the opportunity to visit devastated portions of Louisiana as part of a joint task force staffed by the Centers for Disease Control and Prevention (CDC) and the EPA. The taskforce was charged with identifying the overarching environmental health issues facing New Orleans in order to re-inhabit the City. As we saw first hand, the enormity and complexity of this disaster will require sustained, long-term coordination and cooperation among federal, state and local governments and citizens.

My testimony will provide you with an overview of our role and activities in relation to the affected Gulf region, our coordination with federal, state and local partners, and a snapshot of our primary environmental concerns.

Initial Response to Hurricanes Katrina and Rita

EPA's response to Hurricane Katrina began on August 25th, several days before the storm made landfall. Our agency pre-deployed personnel to the FEMA National Response Coordination Center and sent On-Scene Coordinators (OSCs) to the Florida, Louisiana, Alabama and Mississippi Emergency Operations Centers. The OSC is the federal official responsible for monitoring or directing responses to all oil spills and hazardous substance releases reported to the federal government. After landfall, we sent additional personnel to the affected areas as soon as travel into the region was possible.

In anticipation of Hurricane Rita, EPA also deployed response experts to the multi-agency Regional Response Coordination Center in Austin, TX on September 20th. The number of EPA staff and contractors currently assisting with recovery efforts is more than 1,100 in the affected Gulf region.

EPA Role in Federal Response

After helping with immediate rescue needs, EPA turned its attention to its primary responsibilities under FEMA's National Response Plan (NRP). Under the NRP, EPA is the primary federal agency for Emergency Support Function (ESF)-#10, which addresses oil and hazardous materials response. Our responsibilities include preventing, minimizing, or mitigating threats to public health, welfare, or the environment caused by the actual or potential releases of

oil and other hazardous materials. Because of the potential environmental and public health risks associated with the floodwaters, our office has been thoroughly engaged in this area of response.

In addition to ESF-#10, EPA also works with other agencies to provide support for several other Emergency Support Functions, including ESF-#3, which addresses Public Works and Engineering. Our responsibilities under ESF-#3 include: testing the quality of floodwaters, sediments, and air in partnership with the Louisiana Department of Environmental Quality (LDEQ) and assisting with the restoration of the drinking and waste water infrastructure in the affected states.

The Army Corps of Engineers (USACE) has the primary responsibility for federal response activities under ESF-#3; however EPA, FEMA and other Federal agencies provide support. Since the beginning of the response, EPA's On-Scene Coordinators and other EPA personnel have worked closely with USACE to provide technical assistance, instructions, and advice on floodwater, drinking water and wastewater issues. Looking towards recovery, ESF-#3 designates FEMA as the primary agency to accomplish the ESF mission with respect to infrastructure recovery programs and the FEMA Public Assistance Program.

EPA will also be engaged with its federal partners in ESF-#14, which is focused on long-term community recovery. This is the first time that this Emergency Support Function, which was incorporated into the National Response Plan in 2004, has been activated. FEMA has the primary responsibility for coordinating efforts under ESF-#14. EPA's identified role is to provide technical assistance for planning for contaminated debris management and environmental remediation, and in carrying out this function, the Agency will also provide our expertise to support long-term efforts to restore drinking water and wastewater infrastructure.

It is important to note that as always, our primary responsibility is to support state public health and environmental agencies in addressing the significant challenges they face in fulfilling their missions. In the course of responding to the enormous challenges presented by this tragedy, states are relying heavily upon EPA personnel and technical expertise, and we are happy to be able to provide this assistance.

Floodwaters

In the immediate aftermath of Katrina, the potential exposure or contact by residents and emergency response personnel to contaminated floodwaters was among our leading concerns. EPA, in close coordination with LDEQ, began water sampling on September 3rd. Water sampling was halted from September 20 through September 24 due to Rita, but resumed September 25.

The floodwaters were analyzed for over 100 chemical priority pollutants as well as for bacteria. Results to date indicate that the water had levels of E. coli that greatly exceeded EPA limits for contact. Some tests found contaminant levels exceeding EPA drinking water action levels; however the floodwaters were never used, nor were they expected to be used, for drinking water purposes. In initial screening analysis of the floodwater, we utilized drinking water MCLs in order to provide some context for the results, not to provide a statement of health risk. Throughout this process, EPA has taken great steps to ensure scientific accuracy. EPA solicited the assistance of the Science Advisory Board to review the floodwater sampling plan, and EPA and CDC have routinely conducted a thorough data review, and interpreted the data for potential human health effects.

Surface Water Quality and Fisheries

As we moved beyond our immediate response, EPA began working closely with its federal and state partners to mitigate environmental impacts to Lake Pontchartrain caused by the floodwaters. Specifically, EPA worked with the Corps to institute the use of skimming booms and aerators in the Lake and canals. Skimming booms were deployed to remove oil and debris from floodwater prior to pumping. After pumping, additional booms in the canals leading to the Lake further reduce oil, debris, and solids. Aerators are also being used in the canals to raise the dissolved oxygen levels in the water prior to outfall to Lake Pontchartrain. The booms and aerators will remain in place through completion of un-watering operations and at least through the end of October.

As we move beyond the short term mitigation measures, sampling and monitoring data will be needed to help states and EPA answer the following questions:

1. Did storm-related contaminant releases occur that affected the quality of surface water, sediments, ecological and seafood resources in the impacted area, including Lake Pontchartrain, coastal and inland waters and Gulf of Mexico offshore waters?
2. When will it be possible to open coastal and inland waters to the uses for which the states have designated them in their water quality standards?
3. What contaminant releases are likely to continue during recovery and reconstruction and what risk management action may be necessary and appropriate to consider?

EPA is working with federal partners, including the National Oceanic and Atmospheric Administration (NOAA), the Food and Drug Administration (FDA), and the U.S. Geological Survey (USGS), and state and local partners on coordinated mid term and long term sampling and monitoring activities to provide the necessary data. Sampling of water and sediment quality

in Lake Pontchartrain; near coastal waters; coastal bayous, bays, and wetlands; and the Gulf hypoxia zone will be conducted by EPA, USGS, NOAA and the states. Efforts are currently underway to assess coastal ecosystems, biological condition, fisheries, water quality, sediment quality, seafood safety, and human-health risks in coastal ecosystems of Louisiana, Mississippi and Alabama.

In addition to assessing potential contamination in water samples, EPA is assisting in efforts to determine whether contaminants resulting from Katrina are affecting the quality of seafood. EPA worked with the states of Louisiana, Mississippi, and Alabama, and FDA to coordinate sample collection and analysis of contaminants in finfish and shellfish in Lake Pontchartrain, Lake Borgne, and the Mississippi Sound. All of the chemical and microbiological analyses will be conducted by FDA, which will help provide a level of consistency in the interpretation of the results. FDA and LDEQ are using the same sampling protocols, which also will help provide a level of consistency in the interpretation of the results. The State of Mississippi has commenced sampling in the Mississippi Sound using the FDA protocols. The data developed from this effort will help the states, FDA, and EPA know when the levels of pathogens have decreased to a level which would allow for the re-opening of oyster harvesting areas in these lakes, and to determine whether levels of chemical contaminants are increasing in the finfish to the point where public health may be at risk.

Drinking Water and Wastewater Infrastructure

Drinking water and wastewater utilities did not escape damage from Hurricanes Katrina and Rita. However, the type and extent of damage was dependent on the paths of the respective hurricanes. In Mississippi and Louisiana, some facilities experienced significant physical

damage due to storm surges and strong winds, and many more were primarily affected by loss of electricity and flooding. It is a high priority of the states and EPA to re-establish operations at all affected facilities.

In the aftermath of Hurricane Katrina, staff from our Regional offices moved quickly to provide support to state drinking water and clean water agencies to assess the status of facilities and identify their immediate needs. In Louisiana, more than 25 teams consisting of state, EPA, and rural water association staff spread across the affected area to assess the status of over 600 drinking water utilities in the southeastern parishes that were most heavily impacted by the storm. Shortly before Hurricane Rita, the state expanded its focus to evaluate all 1,591 drinking water utilities statewide. As of October 18, the state had assessed the status at all but 4 water utilities. Although some utilities may still have repairs to make, the majority are now operating without a boil water advisory. 40 utilities historically serving approximately 13,000 people are operating under a boil water advisory and 76 utilities historically serving around 105,000 people are not operating. Most of the utilities that are still not operational are located in the southwestern part of the state that was affected by Rita and in the parishes north of Lake Pontchartrain and southeast of New Orleans that were affected by Katrina.

In Mississippi, EPA staff began arriving on August 30 and partnered with state staff to assess the status of 1,367 drinking water utilities throughout the state. The teams completed their assessments by September 17. As of October 18, 54 utilities serving 43,000 people were still operating under a boil water advisory. 30 utilities serving 10,000 people were not operational. As is the case with Louisiana, many of the systems that are not operational have been subject to heavy structural damage and may no longer have customers to serve.

Alabama drinking water utilities largely escaped damages. As of October 18, all utilities in the affected area were operating without a boil water advisory.

In Texas, the state has not requested significant assistance from EPA and is still working to assess the extent of damages at drinking water utilities. As of October 18, the state had identified 1,057 utilities that had been affected by Hurricane Rita. The state has reported that 795 utilities serving 4.6 million people are operational. Another 186 utilities serving approximately 280,000 people were operating under a boil water advisory. 3 utilities serving 245 people are not operational and the state is still working to assess the status of 73 systems that normally serve 60,000 people.

Drinking water quality is not the only concern of EPA and state regulators. It is also critical to ensure that wastewater facilities are operational to protect receiving waters, particularly as drinking water utilities come back on line. The states of Louisiana and Mississippi focused their attention on utilities in the southernmost counties and parishes that were hit by the respective storms. As of October 18, 329 wastewater utilities in the affected areas of Mississippi were operational, although 12 collection systems continued to experience problems. In Alabama, 84 wastewater utilities in the affected area were all operational, although 2 collection systems continued to experience problems. In Louisiana, 13 of the 317 wastewater utilities in the affected area were still not operational and the state was still evaluating 5 utilities to determine their status. In Texas, all 70 wastewater utilities in the affected area were operational.

In describing the status of facilities, it is important to note that when we describe a utility as operational, it does not necessarily mean that the utility escaped damage from the storms. For drinking water, utilities designated as operational are those where a boil water advisory was not

required or has been lifted. The facilities may be fully operational, operating on emergency power, or operating with some damage to the distribution system. For wastewater utilities, operating facilities are those that are on-line and processing wastewater. These may be fully operational facilities, facilities operating on emergency power, facilities with partially damaged collection systems, facilities that have partially damaged treatment processes, and/or facilities operating with temporary equipment installed by EPA contractors.

As a more detailed damage assessment is completed, and applications for financial assistance from FEMA's Public Assistance program are received, we will be able to provide a more comprehensive status report on the facilities.

I would like to take a moment to highlight what I consider to be some of the more significant technical assistance efforts we have provided in the field. In Mississippi, EPA has been tasked by FEMA with multiple drinking water and wastewater missions which included completing initial damage assessments shortly after the storm's landfall, assisting in short-term relief by directing contractors to implement temporary repairs, and by completing long-term project worksheets under the FEMA Public Assistance Program. EPA professionals are currently overseeing contractor crews who are working to repair temporary blockages. In addition to assisting with recovery of public water service, EPA played a critical role in securing portable water treatment units for select public health priority facilities located in areas with severely damaged public water systems, including Biloxi Regional Medical Center and two communities in Waveland, Mississippi.

Many people living in the affected area are served by private wells and septic/decentralized systems. EPA mobile laboratories in Mississippi and Louisiana, which initially provided support to test water for public water systems, are now largely focusing their

efforts on testing private water supplies. To date, EPA's mobile lab located in Gulfport, MS has tested upwards of 1188 samples (516 of which have been from private wells). The EPA lab in Livingston, Louisiana has been analyzing private well samples and has received between four and twenty-seven samples per day. Another EPA lab, currently located in Kinder, Louisiana, has been assisting with analysis of special bacteriological samples for public water systems in southwestern Louisiana, and is now prepared to assist with analysis of private well samples.

Major Drinking Water and Wastewater Systems

New Orleans, Louisiana

The status of facilities in the New Orleans area has been of particular concern to the Agency and the nation as a whole. We understand the importance of making the City habitable again for residents, and to this end EPA and CDC formed a joint task force to advise local and state officials of the potential health and environmental risks associated with returning to the City of New Orleans. Their report, titled *Environmental Health Needs and Habitability Assessment*, was issued on September 17th and identifies a number of challenges and critical issues for consideration prior to the reoccupation of New Orleans. The task force is now incorporated into the Federal New Orleans Reoccupation Zip Code Assessment Group (Zip Code Assessment Group), which will provide information on a broad range of issues, ranging from infrastructure to health issues. Their recommendations will assist State and Local officials in their decisions regarding when to allow residents to reoccupy the city. As part of this larger group, EPA will continue to work to identify potential health and environmental risks associated with returning to the city based on the Agency's ongoing efforts to assess the quality of the air, water and sediment.

Many of the City's water utilities were significantly impacted by the Hurricane and subsequent flooding event. New Orleans proper is primarily served by two drinking water plants: the Carrollton plant on the East Bank of the Mississippi River, which normally serves approximately 428,000, and the Algiers plant on the West Bank, which serves close to 60,000. Likewise, there are two principal wastewater treatment plants, one located on the East Bank and one on the West Bank. The drinking water and wastewater utilities on the West Bank largely escaped damage and were operational shortly after the storm. The larger plants on the East Bank, which serve most of the City, experienced more significant problems.

While the drinking water treatment plant itself suffered moderate damage due to the storm, the distribution system was severely compromised, particularly in the 9th Ward. On October 6, after service was shut off to the lower 9th Ward and eastern parts of the City and tests indicated that water did not exceed EPA limits for potentially harmful bacteria, the Louisiana Department of Health and Hospitals (LDHH) lifted the boil water advisory for areas west of the Industrial Canal. The Department cautioned that water in the lower 9th Ward and east of the Canal remains under a boil water advisory.

The wastewater treatment plant serving the East Bank, which normally serves approximately 460,000 people, suffered significant damage to its treatment facility and collection system. The plant itself was flooded during both hurricanes, and until October 10, the access road to the plant was flooded. We understand that the Sewerage and Water Board of New Orleans achieved primary treatment on October 16, and expects to have secondary treatment by November 15, but that it could take at least 9 months to get their entire collection system back to pre-Katrina conditions.

EPA is currently participating in a multi-agency effort to fully restore the drinking water and wastewater utilities in New Orleans. Meetings are being held several times a week between the Sewerage and Water Board for New Orleans, FEMA, the COE, EPA, LDEQ, and LDHH to discuss the infrastructure reconstruction needs. Clearly, full recovery of the water and waste water infrastructure will take time and resources.

In Louisiana, EPA Region 6 has been assisting in monitoring drinking water quality provided via water haulers. With approximately 60 water haulers per day filling up at four different approved watering locations, EPA contractors became aware of some unapproved water haulers (non-food grade tankers), attempting to fill at approved watering locations and actually stealing water from unapproved watering locations (i.e., fire hydrants), and referred these activities to LDHH and EPA staff. EPA Region 6 is taking enforcement action against two companies that have been associated with unapproved water hauling practices.

Gulfport, Mississippi

The City of Gulfport operates four separate water systems, serving approximately 75,000 people. As a result of power loss and damaged infrastructure, pressure was lost in the water distribution lines, causing concern that pathogenic organisms in the floodwaters could contaminate the systems through leaks and cracks in the piping. City of Gulfport crews worked day and night to shuttle fuel supplies for the generators in order to maintain pressure. By September 26, the boil water advisory was lifted for all four systems.

Gulfport's major wastewater treatment plant suffered severe structural damage in the storm and was not operational for two weeks due to five feet of floodwater. The plant is now operating with secondary treatment, thanks in part to the work of EPA contractors who installed

temporary bypass pumps. The city's wastewater collection system was also heavily impacted by the storm, and EPA and its contractors continue working to clear manholes and collection lines.

Biloxi, Mississippi

Biloxi's three water systems collectively serve approximately 47,000 people and suffered greater water damage than Gulfport's due to a larger storm surge in the area. Ten wells were submerged, and there was extensive damage to equipment at well sites. The boil water advisory was lifted in late September.

Of the two wastewater treatment plants serving Biloxi, one suffered severe damage, also due to the storm surge. The flooding disabled standby generators and electrical controls at the facility. As of October 14, the plant is operating with primary treatment only. EPA contractors are currently working to locate the equipment needed to restore the facility's secondary treatment. Biloxi's second plant suffered less severe damage, and continued to operate.

Long-Term Recovery of Drinking Water and Wastewater Utilities

As noted, staff from the states, EPA and other agencies have worked to complete initial response assessments of water facilities in order to identify those utilities with immediate needs (e.g., generators) to become operational. In carrying out these assessments, the evaluators did not assign costs to damages. It will take more thorough assessments of damage to identify the long-term costs of recovery.

EPA is making an effort to work within the National Response Plan framework to see that work needed to help utilities recover is carried out. In Mississippi, 12 EPA professionals continue to assist FEMA in completing damage assessments among public water systems and wastewater systems eligible for reimbursement of costs to repair or replace infrastructure damage

under FEMA's Public Assistance Program, which has traditionally served as the mechanism for financing recovery efforts. EPA work entails reconciling FEMA and EPA inventories of utilities eligible for assistance; delivering Request for Public Assistance applications to utilities and assisting utilities in completing these forms; and assisting FEMA project officers in completing project worksheets by collecting and assimilating photographs, locational data, and other necessary documents. We are working with FEMA officials in Louisiana to provide assistance to expedite recovery efforts. As these assessments are carried out, EPA is collecting the information derived from them to complete a refined estimate of potential needs for returning systems to their pre-hurricane condition. EPA is also working with other state and rural water representatives to ensure that the needs for all water systems, including privately owned, profit-making systems (which traditionally cannot receive FEMA Public Assistance) are evaluated.

At the option of a state, the Clean Water or Drinking Water State Revolving Fund programs may provide emergency or long-term financial assistance to help water utilities recover. However, in previous disasters, State Revolving Fund programs have not traditionally provided emergency assistance – due in part to the structure of the program. One concern that state officials have expressed to the Agency is how they will manage outstanding loan agreements to communities that have been damaged by the storm and which may have difficulty maintaining a revenue stream from which to repay loans. EPA will work with states to identify appropriate solutions for these borrowers.

As infrastructure is rebuilt, it will be important to ensure that new construction is sustainable. In our water infrastructure programs, EPA is emphasizing practices that can help them operate more efficiently and effectively over the long-term. We encourage states, communities, utilities and other stakeholders to carefully consider how facilities can be rebuilt in

such a way as to facilitate sustainability by, for example, incorporating water efficiency techniques to reduce the volume of water that needs to be treated, adopting watershed approaches to managing stormwater, or by encouraging consolidation or regionalization of small drinking water utilities.

Wetlands, Buffers, and Barriers

This event underscores the importance of wetlands, buffers and barriers in protecting our coasts and communities from flooding. These key landscape features are often the first line of defense for our coastal communities, and their presence directly reduces the magnitude of the wind-driven storm surge (wave heights are reduced by 1 foot for every 1-3 miles of wetlands). Moreover, these areas are the nursery for this country's most productive commercial fishery, and they are a vital link for our domestic energy supply.

According to the U.S. Geologic Survey, Hurricane Katrina converted more than 30 square miles (approximately 25%) of preexisting marsh around the upper portion of Breton Sound to open water. Other adjacent areas also sustained major wetland losses not yet estimated, and the fragmentation of remaining marsh makes it vulnerable to further losses. Finally, barrier islands off the Louisiana coast sustained serious damage, which makes the coastline more susceptible to future storm damage.

As the USGS, DOI/FWS, USACE, EPA, the states and others complete their ongoing analysis of the impact of Hurricanes Katrina and Rita on Louisiana's wetlands and the broader Gulf Coast areas impacted, we will gain a clearer understanding of how these major storms have altered the coastal environment. This information can then be used to reassess, refine, and

develop needed environmental restoration plans to strengthen the coastal areas' natural aquatic system protective capacity for future storms.

EPA has a history of successful barrier island restoration projects in coastal Louisiana. Our most recent project, Timbalier Island Dune and Marsh Restoration, restored 2.2 miles of barrier island and was completed approximately \$3 million under budget. The project was able to withstand an approximately 12-foot storm surge from Katrina. Our recent aerial assessments post-Katrina and Rita indicate that the project remains largely intact and able to absorb another storm surge as well as daily wave energies from the Gulf of Mexico.

Federal, state, and local governments will face many challenges in developing a restoration plan for the area. For example, the Alabama and Mississippi Gulf Coast does not have the deltaic wetlands that provide a buffer for developed areas. Still undecided is whether decision-making officials will need to address this in restoration plans. If they do, several options exist, such as the beneficial use of dredged material from the New Orleans District. This issue is but one of the many challenges within the restoration planning that Federal, state, and local partners will need to work together to address.

Environmental restoration efforts will be costly, and a thorough assessment in light of the changes brought by Hurricanes Katrina and Rita will be important for efficient and effective capital investments. In partnership with USACE, USGS, DOI/FWS, NOAA, the affected states, and others, EPA envisions a collaborative effort to examine restoration priorities in light of the best available information on the current state of the coastal environment. Another important piece of analysis is an evaluation of the dozens of coastal restoration projects constructed under the Breau Act by the Army Corps, EPA, and others since 1990 at a cost of \$500 million. Lessons learned from the demonstration projects should be applied to future efforts.

Sustainable Re-Development

The major public investments needed to reestablish a strong coastal line of defense should be leveraged by localized environmental enhancements linked to housing, commercial, industrial, and transportation system redevelopment. There is a compelling need to ensure sound environmental principles are incorporated into the design of rebuilt communities. An opportunity exists to define best practices for redevelopment and offer regulatory and other incentives for their application.

Government agencies could make experts in these design principles available to local communities as they consider redevelopment plans, to incorporate the best practices for making the built environment along our coasts as sustainable as possible.

A comprehensive approach to environmental restoration and community redevelopment, which effectively pairs the best efforts of all involved government and private parties, can protect people and the critical resources of this area from future tropical storms. By restoring the coastal environment's capacity to buffer our communities from harm, and rebuilding in a more resilient manner, we can ensure the long-term vitality of the National treasure that is the Gulf Coast.

Informing the Public

We view communication to the public, workers, and other agencies to be a critical component of our response effort. The Occupational Health and Safety Administration (OSHA) was on-scene early in the response effort, distributing over 3,500 fact sheets by hand in the first two weeks and conducting interventions that removed more than 850 workers from serious or life threatening hazards. OSHA continues these activities and on a daily basis, EPA response

personnel and contractors receive health and safety instructions regarding field conditions and safe work practices. EPA's preliminary sampling results are also provided to On-Scene Coordinators to facilitate field decisions and ensure health and safety of workers.

Within two days after Katrina hit, Office of Water quickly sent thousands of copies of "What to Do after the Flood" to Louisiana and Mississippi. Subsequently, we sent copies of both "Emergency Disinfection of Drinking Water" and "Septic Systems--What to Do after the Flood." Because more than 34,000 residents of Mississippi and Louisiana speak Vietnamese or Spanish, EPA provided the Gulf Coast states with Spanish and Vietnamese translations of these three fact sheets.

Additionally, EPA has partnered with LDEQ to record public service announcements in English, Spanish, and Vietnamese that provide information on mold, cleaning up sediment, asbestos, lead, carbon monoxide, household cleaners, gas leaks, hazardous materials and floodwater.

More generally, EPA has established a hurricane website, which provides information to the public on a variety of issues, including drinking water, well water and floodwater sampling results. The site contains newly added flyers and a long list of frequently asked questions that provide basic information to returning residents and the general public. The flyers are being distributed in affected communities as part of EPA's continuing outreach to help the Gulf Coast region recover. The materials provide information on environmental and health issues in impacted areas and highlight possible hazardous situations residents may encounter during cleanup activities.

Future Challenges and Conclusion

Looking ahead, much remains to be done to help address the public health and environmental impacts of Hurricane Katrina. EPA will continue to work with state health and environmental quality agencies, the USACE, and FEMA to support local governments in their efforts to repair and restore public facilities, including drinking water and waste water systems. We will also continue to monitor in the region and make sure that this information is readily available to federal, state and local officials, other responders, and the public.

The nation faces an enormous challenge in restoring and rebuilding the affected areas, but we are also faced with a unique opportunity to demonstrate and encourage sustainable practices in infrastructure and development. We expect that citizens and government agencies will look to EPA and our Federal partners for technical expertise, scientifically sound data, and practical advice on environmental and public health conditions in the region for some time to come. We are focused on meeting that challenge.